CONTEXT LOOK AHEAD STORAGE STRUCTURES

ABSTRACT OF THE DISCLOSURE

A memory storage structure includes a memory storage

5   device, and a first meta-structure having a first size and

operating at a first speed. The first speed is faster than

a second speed for storing meta-information based on

information stored in a memory. A second meta-structure is

hierarchically associated with the first meta-structure.

10   The second meta-structure has a second size larger than the

first size and operates at the second speed such that faster

and more accurate prefetching is provided by coaction of the

first and second meta-structures. A method is provided to

assemble the meta-information in the first meta-structure

15   and copy this information to the second meta-structure, and

prefetching the stored information from the second meta-

structure to the first meta-structure ahead of its use.